

That which is claimed is:

1. An electrically conductive curable organosiloxane composition comprising the product obtained by blending to homogeneity

(A) 100 parts by weight of a first polyorganosiloxane containing at least two alkenyl radicals per molecule;

(B) an organohydrogensiloxane containing at least two silicon-bonded hydrogen atoms in each molecule, in a quantity sufficient to provide from 0.5 to 3 silicon-bonded hydrogen atoms per alkenyl radical in ingredient (A);

(C) from 50 to 2,000 parts by weight of finely divided silver particles treated with a first organosilicon compound selected from the group consisting of silanes containing at least one alkoxy group and organosiloxanes; and

(D) an amount sufficient to promote curing of said composition of a platinum catalyst.

10052760-011803

10052760-011802

2. A composition according to claim 1 wherein said first organosilicon compound is selected from the group consisting of silanes of the general formula $R_aSi(OR')_{3-a}$, cyclic organosiloxanes, a second polyorganosiloxane containing silanol groups on the terminal silicon atoms and organosiloxane resins wherein at least a portion of the repeating units are $SiO_{4/2}$ units, and wherein R and R' are individually selected from alkyl radicals containing from 1 to 4 carbon atoms, the thickness of said layer is less than 0.1 micrometer, and said silver particles are prepared by a method selected from the group consisting of chemical reduction, electrolytic deposition and atomization of molten silver.

3. A composition according to claim 2 wherein said composition further comprises up to 20 weight percent, based on the weight of said first polyorganosiloxane, of a second organosilicon compound containing at least one silicon-bonded alkoxy group per molecule.

4. A composition according to claim 3 wherein said composition contains 0.5 to 8 parts by weight of said second organosilicon compound per 100 parts by weight of said first polyorganosiloxane, and said second organosilicon compound further comprises at least one substituent selected from the group consisting of silicon bonded hydrogen, silicon-bonded vinyl, epoxy and trialkoxysilylalkyl.

5. A composition according to claim 3 where said organohydrogensiloxane contains at least one silicon-bonded alkoxy group.

6. A composition according to claim 5 wherein said composition contains from 0.5 to 8 parts by weight of said second organosilicon compound per 100 parts by weight of said first polyorganosiloxane, and said second organosilicon compound contains not more than one silicon bonded hydrogen per molecule.

7. A composition according to claim 1 wherein said silver particles are ground in the presence of said first organosilicon compound as a lubricant, said composition contains from 300 to 600 parts by weight of said particles per 100 parts by weight of said first polyorganosiloxane, the viscosity of said first polyorganosiloxane is from 50 to 500,000 centipoise (0.05-500 Pa.s) and the concentration of said organohydrogensiloxane is equivalent to 0.5 to 3 silicon-bonded hydrogen atoms per alkenyl radical present in the total concentration of said first polyorganosiloxane.

Add A2